

Microsoft Dynamics AX 2012 for Manufacturing Organizations

A comprehensive solution for managing discrete, process, and lean manufacturing



“The ability to view and apply various manufacturing processes through a single ERP solution is the best solution for our business. With Microsoft we are confident we will remain on the cutting edge of technology.”

— **Hubertus Meisterjahn**
COO, Dornbracht

Microsoft Dynamics AX 2012: *Powerful. Agile. Simple.*

Manufacturers have always worked to improve performance against benchmarks such as cost, time-to-market, product quality, and inventory optimization. Now globalization, contract manufacturing, growing environmental and social awareness, and the need for instant operational insight are adding new opportunities as well as challenges. Microsoft Dynamics® AX 2012 helps manufacturers meet these opportunities and challenges with a powerful enterprise resource planning (ERP) solution that is purposely built for manufacturing organizations.

In today's global marketplace, manufacturers rely on technology for product design, inventory management, resource utilization, production scheduling, process optimization, and more. They employ a mix of discrete, process, and lean manufacturing methods that are often managed through separate systems. This limitation makes it difficult to cost-effectively satisfy customer demands, particularly across multiple sites and geographies. The growth of contract manufacturing, emerging requirements for green manufacturing, and the diversity of the global workforce all accentuate shortcomings in many of today's ERP solutions.

To overcome these challenges, manufacturing workers need real-time access to rolespecific information and tools that help them perform their individual responsibilities, in the office or on the shop floor, at any location around the world. A world-class ERP solution provides these capabilities while managing discrete, process, and lean manufacturing models with a single solution—and scheduling resources to jobs and operations across multiple locations.

The Microsoft vision for manufacturing is one in which workers in a wide range of manufacturing businesses access specific information easily and securely with the tools they need to perform their individual roles, from a single source—Microsoft Dynamics AX 2012—from any location around the world. This unified approach enables each manufacturing business to run, and continuously improve, its own unique mix of manufacturing processes, across multiple sites and geographies. Microsoft Dynamics AX 2012 reflects the Microsoft commitment to deliver the breadth and depth of Microsoft innovation to manufacturers, to help them realize this vision.

POWERFUL: Meet the specific needs of your business.

Use technology purposely-built for the manufacturing industry: Improve control across a mix of make-to-order, make-to-stock, and other production processes. Enhance customer and vendor agreements with flexible contract structures. Support your organization end-to-end with rich, core ERP capabilities, including HR, finance and governance, risk, and compliance (GRC) management.

Scale your organization quickly with a global manufacturing solution: Expand into new geographies using built-in localizations for 36 countries.* Enable global planning with unified operations resource models. Improve efficiency by sharing global data for general ledger, relationships, and products, and by using common processes for intercompany trade and shared services.

Gain immediate insight and boost productivity with RoleTailored user experiences: Take advantage of new Role Centers, fact boxes, and enriched previews. Provide ad hoc, self-service business intelligence and reporting for key manufacturing operations, including prebuilt reports from Microsoft® SQL Server® Reporting Services. Provide business process context via notifications and alerts initiated by embedded workflows. Help ensure segregation of duties and simple user account setup and maintenance with role-based security and single sign-on capabilities.

AGILE: Respond to changing conditions, correct capacity imbalances, and track sustainability.

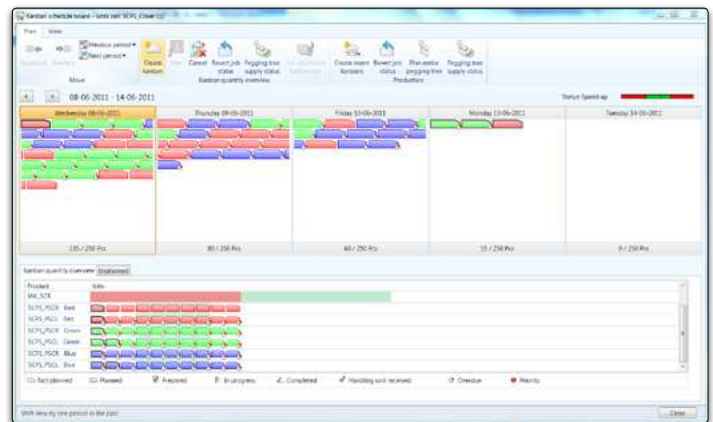
Adapt to changing process and regulatory requirements with model-driven methods: Increase production planning and execution flexibility by unifying process, discrete, and lean manufacturing operations. Improve business visibility with financial dimensions. Configure processes with a graphical workflow editor that helps you identify inefficiencies and optimize performance.

Improve responsiveness to demand: Handle customer demand spikes by rapidly onboarding vendors. Increase utilization and responsiveness with flexible resource deployment across multiple routings. Fulfill customer demand with the constraints-based product configurator.

Enable a green and efficient enterprise: Track waste, water usage, energy consumption, carbon footprint, and related costs with the Environmental Sustainability Dashboard. Reduce waste and streamline production using lean manufacturing techniques.



Planners can view supply and demand and take action from a single form.



The kanban scheduling board features an intuitive visualization.

SIMPLE: A familiar user experience makes it easy to find, use, and share information.

Accelerate user onboarding and adoption with a familiar user experience: Speed ramp-up for users of all generations with kanban boards and other visualization tools, touch-based screens for shop floor workers, and the Microsoft Office look and feel. Use familiar productivity tools and share data between Microsoft Dynamics AX 2012 and Microsoft Office 2010.

Collaborate easily with employees, customers, suppliers, and partners. Simplify collaboration with Microsoft SharePoint® portals for vendors and customers, and integration with the administrative ERP (two-tier scenario) using Application Integration Framework enhancements. Support ad hoc, end-to-end business process integration with partners and customers through Sites Services, an online service for Microsoft Dynamics. Speed information sharing across virtual teams with presence information and Microsoft Lync™ integrated communications.

Simplify deployment, management, and upgrading with application lifecycle management: Ease ERP implementation and administration, and gain IT efficiencies, with simplified application lifecycle management. Optimize IT investments to improve total cost of ownership (TCO) and productivity through interoperability between Microsoft Dynamics AX 2012 and other Microsoft technologies.

Microsoft Dynamics AX 2012 Manufacturing Highlights

Familiar User Experience	<ul style="list-style-type: none"> • Deliver RoleTailored access to unified work lists, visual task queues, business processes and reports, notifications, key performance indicators (KPIs), and other important information. Personalized Role Centers are available for eight manufacturing-specific roles. • Simplify data access with familiar Microsoft tools, including Microsoft Word, Excel®, and SharePoint.
Product Information Management	<ul style="list-style-type: none"> • Centralize management of products and services across the organization, including bill-of-materials (discrete mfg.), formulas (process mfg.), and variant and configurable products. • Maintain items by using up to three item dimensions and predefined combinations. • Manage the release of products and services to individual legal entities. • Specify dimensions for advanced inventory control, tracking, and tracing. • Configure custom products with a unique bill of material and routing using the product configurator. The product configuration models are based on constraints, and can be used from sales order, sales quotation, purchase order, and production order.
Discrete Manufacturing	<ul style="list-style-type: none"> • Execute multiple production strategies, including configure-to-order, assemble-to-order, make-to-stock, and make-to-order. Use both push and pull production control mechanisms. • Optimize production and materials planning, forecasting, and scheduling. Simultaneously schedule materials and capacity. Calculate available-to-promise (ATP) and capable-to-promise (CTP) deliveries. • Create, schedule, view, track, split, roll back, or categorize production orders. • Understand WIP and actual cost through production tracking and reporting. Track detailed resource and throughput costs, including work center costs. Report production variances to standard costs. • Manage routing: Plan simple, sequential, and complex networks; use simultaneous routes in the same network. Use rough-cut capacity and detailed scheduling capabilities. Organize the shop floor into logical production units at individual sites. • Quickly schedule/reschedule jobs and simulate alternatives by dragging Gantt chart items. Resolve scheduling overloads by reassigning operations to alternate work centers. Optimize scheduling across the organization with a unified resource model and scheduling engine.
Process Manufacturing	<ul style="list-style-type: none"> • Define multiple inventory dimensions: dual units of measure, catch-weight calculations, packaging codes, variations to the main item, and lots. • Manage multilevel formulas or recipes, co-products and by-products, electronic signatures, and packaging options. • Let customers request multiple quality specifications per product while combining similar products in production to improve machine utilization. • Analyze and monitor production costs and requirements for each sales order component using graphical representations of multilevel formulas and recipes. • Reduce inventory costs and eliminate waste by pulling inventory in optimal sequence using “best-before” management and first expired/first out (FEFO) or first in/first out (FIFO) picking guidance. • Facilitate regulatory compliance with agencies such as the U.S. Food and Drug Administration (FDA) by validating manufacturing processes.
Lean Manufacturing	<ul style="list-style-type: none"> • Model manufacturing and logistics processes as production flows. • Use kanbans to signal demand requirements. • Monitor and manage kanban jobs using kanban boards.
Shop Floor Control	<ul style="list-style-type: none"> • Register products, resources, and items for operations and jobs. Touch-enabled data entry simplifies the user experience.
Inventory Management, Master Planning, and Quality Management	<ul style="list-style-type: none"> • Control inventory with a variety of models and safety stock support. • Apply multiple options for inventory valuation, including: first in/first out (FIFO), last in/first out (LIFO), standard cost, and weighted average. • Master planning: Create and run multiple plans across multiple sites to meet demand and keep orders synchronized based on changes in internal or external demand. Improve distribution planning and forecast scheduling with an overview of longer-term purchasing, production, and resource requirements. • Optimize enterprise-wide planning by providing upstream organizations in your supply chain with visibility into the demand of downstream organizations. • Streamline subsidiary trading and apply intercompany trading policies. Create intercompany order chains directly and automatically from sales order to end-customer with and without direct delivery, and update sales orders from purchase orders and vice versa. • Multisite: Maintain centralized control of all site parameters from any location, whether site-specific or company-specific, including inventory, performance goal management. BOMs, routing, costing, and profit and loss dimensions. Manage multiple, distributed warehouses; apply different costs, prices, and cost category rates; and route data by dimensions. • Support multiple time zones with preferences for date and time fields set at the user level. • Improve business processes for quality assurance, quality control, and lot traceability.

Warehouse Management	<ul style="list-style-type: none"> Automatically receive suggestions for received item placement based on preset rules for one or multiple warehouses. Track received orders with pallet identification; generate an optimized picking route. Use bar codes to track items and locations electronically. Streamline outbound processes by configuring rules for sending and printing shipment documents.
Procurement and Sourcing	<ul style="list-style-type: none"> Facilitate direct and indirect procurement of goods and services. Utilize self-service capabilities to empower employees to order day-to-day goods and services from searchable online catalogs. Help vendors operate more efficiently by enabling them to perform a variety of tasks online, such as updating profile data and catalog content, submitting invoices, and reviewing payments. Enhance buyer capability to support procurement policies and processes. Extend your procurement process with a cloud-based service facilitating the RFQ process (Sites Services).*
Service Management	<ul style="list-style-type: none"> Streamline service operations with service agreements, service orders, service subscriptions, and repair management.
Financials, Compliance, and Internal Controls	<ul style="list-style-type: none"> Optimize financial operations with general ledger, bank management, fixed assets, accounts payable and receivable, cost accounting, budgetary control, intercompany accounting, and shared services support. Help ensure organizational compliance with laws, regulations, policies, and business rules, including internal controls through the Compliance Center. Take advantage of the Audit Workbench to define your organization's policies and automate auditing processes. Use an Environmental Sustainability Dashboard to track energy use and carbon footprint.
Sales and Marketing	<ul style="list-style-type: none"> Build and strengthen customer relationships through sales management, sales force automation, lead and opportunity management, marketing automation, and case management. Connect easily to Microsoft Dynamics CRM, online and on-premises.
Human Capital Management	<ul style="list-style-type: none"> Manage human resources with Human Capital Management tools including benefits administration, absence management, compensation management, injury and illness tracking, employee development, and competency management.
Business Intelligence and Reporting	<ul style="list-style-type: none"> Give employees instant access to information with built-in reports using Microsoft SQL Server® Reporting Services. Automatically generate custom reports with Microsoft SQL Server Report Builder, an ad hoc query tool. Enable self-service business intelligence with prebuilt data cubes that can be displayed as KPIs in employees' Role Centers and viewed with more detail in Microsoft Excel.
Employee Portal	<ul style="list-style-type: none"> Use the Employee Portal and workflow tools to enforce spending, allow approval policies, and to enable employee self-service for performance goal management.
Tools	<ul style="list-style-type: none"> Automate business processes through a graphical workflow editor to create business rules and custom workflows (or use templates) used by business analysts. Help ensure segregation of duty and minimal setup and maintenance of user accounts with role-based security and single sign-on capabilities. Make organization-specific modifications easily in Microsoft Visual Studio® and X++ development environments. Ease application-to-application and business-to-business integration with a flexible services and application integration framework.
Microsoft Platform Interoperability	<ul style="list-style-type: none"> Maximize existing IT investments, lower TCO, and make additional productivity gains through Microsoft Dynamics AX 2012 interoperability with other key Microsoft technologies, including Microsoft Office, Lync, SharePoint, Windows® and Windows Server®, SQL Server, Microsoft .NET, Microsoft BizTalk® Server, and Visual Studio.

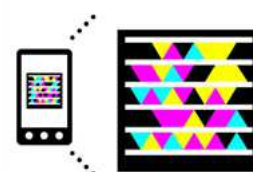
* Check for availability in your country with your local Microsoft office or your Microsoft Dynamics partner.

Partner with industry experts

Microsoft Dynamics AX 2012 is delivered through a global network of partners with deep manufacturing experience. These business partners can provide you with localized services tailored to your specific needs—from solution selection, to planning and design, to customization and configuration, to implementation, training, and ongoing support. This means you can get world-class business solutions from professionals who understand how your business works. To find a local Microsoft Dynamics partner and solutions for your manufacturing business, visit <http://dynamics.pinpoint.microsoft.com>.

Learn more about Microsoft Dynamics AX 2012

Visit our website at www.microsoft.com/dynamics/AX.



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